

What is claimed is:

1        1. A device used in connection with at least one cable having a conductive shield,  
2 comprising:

3            a conductive cable clamp adapted to clamp a periphery of the cable while  
4 conductively engaging the conductive shield of the cable, said cable clamp preventing  
5 electromagnetic radiation from passing by the periphery of the cable.

1        2. The device recited in claim 1, wherein said cable clamp includes a first conductive  
2 plate and a second conductive plate, each of said plates having at least one groove formed  
3 therein, said first plate being positionable against said second plate so that the groove in said  
4 first plate and the groove in said second plate collectively form a hole extending from one  
5 edge of said cable clamp to an opposite edge of said cable clamp, the hole accommodating  
6 the cable therein.

1        3. The device recited in claim 2, wherein each of said plates has a first major surface  
2 and a second major surface that is parallel to the first major surface, the first major surface of  
3 each of said plates having the groove formed therein, the second major surface of at least said  
4 first plate being substantially flat and being free of grooves.

1        4. The device recited in claim 3, wherein the second major surface of at least said  
2 second plate is substantially flat and being free of grooves.

1        5. The device recited in claim 3, wherein the second major surface of at least said  
2 second plate has a further groove formed therein.

1       6. The device recited in claim 5, wherein said cable clamp further includes a third  
2       conductive plate having at least one groove formed therein, said third plate being positionable  
3       against the second major surface of said second plate so that the further groove in said second  
4       plate and the groove in the third plate collectively form a further hole extending from the one  
5       edge of said cable clamp to the opposite edge of said cable clamp, the further hole  
6       accommodating a further cable therein.

1       7. The device recited in claim 6, wherein said third plate has a first major surface and  
2       a second major surface that is parallel to the first major surface, the first major surface of said  
3       third plate having the groove formed therein, the second major surface of at least said third  
4       plate being substantially flat and being free of grooves.

1       8. The device recited in claim 6, wherein said third plate has a first major surface and  
2       a second major surface that is parallel to the first major surface, the first major surface of said  
3       third plate having the groove formed therein, the second major surface of at least said third  
4       plate having another groove formed therein.

1       9. The device recited in claim 2, wherein each of said plates has a plurality of parallel  
2       grooves formed therein, and wherein when said first plate is positioned against said second  
3       plate, the plurality of grooves in said first plate and the plurality of grooves in said second  
4       plate collectively form a plurality of parallel holes, each of which extends from the one edge  
5       of said cable clamp to the opposite edge of said cable clamp, the holes accommodating a  
6       plurality of cables therein.

1           10. The device recited in claim 2, wherein said cable clamp has a rectangular  
2        configuration having four contiguous flat surfaces.

1           11. The device recited in claim 2, wherein said first plate is fixed to said second  
2        plate.

3

1           12. The device recited in claim 1, wherein said cable clamp includes two outermost  
2        conductive plates and at least one intermediate plate disposed between said outermost plates,  
3        each of said outermost plates having an inside major surface having a groove formed therein,  
4        said intermediate plate having opposing major surfaces each of which has a groove formed  
5        therein, wherein at least one of said outermost plates is positionable against said intermediate  
6        plate so that the groove in said at least one outermost plate and the groove in one of the major  
7        surfaces of said intermediate plate collectively form a hole extending from one edge of said  
8        cable clamp to an opposite edge of said cable clamp, the hole accommodating the cable  
9        therein.

1           13. The device recited in claim 12, wherein another one of said outermost plates is  
2        positionable against said intermediate plate so that the groove in said another one of said  
3        outermost plate and the groove in another one of the major surfaces of said intermediate plate  
4        collectively form a further hole extending from the one edge of said cable clamp to the  
5        opposite edge of said cable clamp, the further hole accommodating another cable therein.

1           14. The device recited in claim 13, wherein each of said outermost plates has an  
2        outside major surface that is substantially flat.

1        15. The device recited in claim 1, wherein said cable clamp includes two outermost  
2        conductive plates and a plurality of intermediate plates disposed between said outermost  
3        plates, each of said outermost plates having an inside major surface having a groove formed  
4        therein, each of said intermediate plates having opposing major surfaces each of which has a  
5        groove formed therein, wherein one of said outermost plates is positionable against one of  
6        said intermediate plates so that the groove in said one outermost plate and the groove in one  
7        of the major surfaces of said one of said intermediate plates collectively form a hole  
8        extending from one edge of said cable clamp to an opposite edge of said cable clamp, the  
9        hole accommodating the cable therein.

1        16. The device recited in claim 15, wherein another one of said outermost plates is  
2        positionable against another one of said intermediate plates so that the groove in said another  
3        one of said outermost plates and the groove in another one of the major surfaces of said  
4        another one of said intermediate plates collectively form a further hole extending from the  
5        one edge of said cable clamp to the opposite edge of said cable clamp, the hole  
6        accommodating another cable therein.

1        17. The device recited in claim 16, wherein each of said outermost plates has an  
2        outside major surface that is substantially flat.

1        18. The device recited in claim 1, wherein said cable clamp includes a conductive  
2        flexible fabric having at least one pattern formed therein, the pattern accommodating the  
3        cable therein.

1           19. The device recited in claim 18, wherein the pattern is a star-shaped pattern  
2   formed in said fabric, the pattern including a plurality of evenly spaced slits radially  
3   extending outward from a center of the pattern, and wherein every two adjacent slits form a  
4   triangular flap.

1           20. The device recited in claim 19, wherein one of the slits extends to an edge of said  
2   fabric, to allow the cable to be inserted into the center of the pattern.

1           21. The device recited in claim 19, wherein a plurality of the star-shaped patterns are  
2   formed in the fabric, and arranged in a row.

1           22. The device recited in claim 18, wherein said fabric is adhered over a layer of  
2   foam.

1           23. The device recited in claim 18, wherein said cable clamp includes an upper and a  
2   lower rigid conductive plate, said conductive flexible fabric being clamped between said  
3   upper and lower plates.

1           24. The device recited in claim 23, wherein said upper plate has a semicircular recess  
2   formed at an edge thereof, and said lower plate has a semicircular recess formed at an edge  
3   thereof, the recesses being positioned to correspond to a position of, so as to expose, the star-  
4   shaped pattern.

1        25. The device recited in claim 24, wherein one of said plates has a rear flange, a rear  
2        edge of another one of said plates and a rear edge of said fabric abutting against the rear  
3        flange to position said plates and said fabric relative to each other.

1        26. The devices recited in claim 25, wherein a front edge of said fabric extends past a  
2        front edge of said upper plate and a front edge of said lower plate, when the rear edge of the  
3        another one of said plates and the rear edge of said fabric abut against the rear flange.

1        27. An electronic system, comprising:  
2                at least one electronic subsystem having an electrically conductive system frame and  
3                an electrical component disposed inside of said system frame, said system frame having an  
4                opening therein;  
5                at least one cable electrically coupled to said electrical component, and extending  
6                outside of said system frame via the opening, said cable having a signal wire, and a  
7                conductive shield surrounding the signal wire; and  
8                a conductive cable clamp disposed in the opening and being electrically coupled to  
9                said system frame, said cable clamp being adapted to clamp and conductively engage a  
10                periphery of the conductive shield, said cable clamp preventing electromagnetic radiation  
11                from passing through the opening by the periphery of said cable.

1        28. The electronic system recited in claim 27, wherein said cable clamp includes a  
2        first conductive plate and a second conductive plate, each of said plates having at least one  
3        groove formed therein, said first plate being positionable against said second plate so that the  
4        groove in said first plate and the groove in said second plate collectively form a hole

5 extending from one edge of said cable clamp to an opposite edge of said cable clamp, the  
6 hole accommodating said cable therein.

1 29. The electronic system recited in claim 27, wherein said at least one cable includes  
2 a plurality of cables, wherein said cable clamp includes first and second outermost  
3 conductive plates and an intermediate plate disposed between said outermost plates, each of  
4 said outermost plates having an inside major surface having a groove formed therein, said  
5 intermediate plate having opposing first and second major surfaces each of which has a  
6 groove formed therein, wherein said first outermost plate is positionable against the first  
7 major surface of said intermediate plate so that the groove in said first outermost plate and  
8 the groove in the first major surfaces of said intermediate plate collectively form a hole  
9 extending from one edge of said cable clamp to an opposite edge of said cable clamp, the  
10 hole accommodating one of said cables therein; and

11 wherein said second outermost plate is positionable against the second major surface  
12 of said intermediate plate so that the groove in said second outermost plate and the groove in  
13 the second major surface of said intermediate plate collectively form a further hole extending  
14 from the one edge of said cable clamp to the opposite edge of said cable clamp, the further  
15 hole accommodating another one of said cables therein.

1 30. The electronic system recited in claim 27, wherein said at least one cable includes  
2 a plurality of cables, wherein said cable clamp includes first and second outermost  
3 conductive plates and a plurality of intermediate plates disposed between said outermost  
4 plates, each of said outermost plates having an inside major surface having a groove formed  
5 therein, each of said intermediate plates having opposing first and second major surfaces each  
6 of which has a groove formed therein, wherein said first outermost plate is positionable

7 against the first major surface of one of said intermediate plates so that the groove in said first  
8 outermost plate and the groove in the first major surfaces of said one of said intermediate  
9 plates collectively form a hole extending from one edge of said cable clamp to an opposite  
10 edge of said cable clamp, the hole accommodating one of said cables therein; and  
11 wherein said second outermost plate is positionable against the second major surface  
12 of another one of said intermediate plates so that the groove in said second outermost plate  
13 and the groove in the second major surface of said another one of said intermediate plates  
14 collectively form a further hole extending from the one edge of said cable clamp to the  
15 opposite edge of said cable clamp, the further hole accommodating another one of said cables  
16 therein.

1 31. The electronic system recited in claim 27, wherein said cable clamp includes a  
2 conductive flexible fabric having at least one pattern formed therein, the pattern  
3 accommodating said cable therein.

1 32. The electronic system recited in claim 31, wherein the pattern is a star-shaped  
2 pattern formed in said fabric, the pattern including a plurality of evenly spaced slits radially  
3 extending outward from a center of the pattern, and wherein every two adjacent slits form a  
4 triangular flap.

1 33. The electronic system recited in claim 32, wherein one of the slits extends to an  
2 edge of said fabric, to allow the cable to be inserted into the center of the pattern.

1        34. The electronic system recited in claim 32, wherein said at least one cable  
2        comprises a plurality of said cables; and wherein a plurality of the star-shaped patterns are  
3        formed in the fabric, and arranged in a row.

1        35. The electronic system recited in claim 32, wherein said cable clamp includes an  
2        upper and a lower rigid conductive plate, said conductive flexible fabric being clamped  
3        between said upper and lower plates.

1        36. The electronic system recited in claim 35, wherein said upper plate has a  
2        semicircular recess formed at an edge thereof, and said lower plate has a semicircular recess  
3        formed at an edge thereof, the recesses being positioned to correspond to a position of, so as  
4        to expose, the star-shaped pattern.

1        37. The electronic system recited in claim 36, wherein one of said plates has a rear  
2        flange, a rear edge of another one of said plates and a rear edge of said fabric abutting against  
3        the rear flange to position the plates and the fabric relative to each other.

1        38. The electronic system recited in claim 37, wherein the opening in said system  
2        frame comprises a first opening, and said system frame further includes a second opening that  
3        is contiguous with the first opening, the second opening providing access into said system  
4        frame; further comprising a conductive cover positionable to cover the second opening; and  
5        wherein a front edge of said fabric extends past a front edge of said upper plate and a front  
6        edge of said lower plate, when the rear edge of the another one of said plates and the rear  
7        edge of said fabric abuts against the rear flange, said cover abutting against the front edge of

8 said fabric so that said cover and said cable clamp collectively close both the first opening  
9 and the second opening.

1           39. A method of electrically coupling a first electrical component disposed in a first  
2 subsystem with a second electrical component disposed in a second subsystem, while  
3 maintaining separate electromagnetic radiation boundaries of the first subsystem and the  
4 second subsystem, comprising:

5           providing a first electronic subsystem having a first electrically conductive system  
6 frame and a first electrical component disposed inside of the first system frame, the first  
7 system frame having an opening therein;

8           providing a second electrical subsystem having an second electrically conductive  
9 system frame and a second electrical component disposed inside of the second system frame,  
10 the second system frame having an opening therein;

11           electrically coupling the first electrical component to the second electrical component  
12 using a signal wire of a common cable, the cable passing through the opening in the first  
13 system frame and the opening in the second system frame, the cable having a conductive  
14 shield surrounding the signal wire;

15           exposing the conductive shield in a first region where the cable passes through the  
16 opening in the first system frame and in a second region where the cable passes through the  
17 opening in the second system frame;

18           disposing a first conductive cable clamp in the opening in the first system frame and  
19 disposing a second conductive cable clamp in the opening in the second system frame;

20           electrically coupling the first cable clamp to the first system frame, and electrically  
21 coupling the second cable clamp to the second system frame; and

22        clamping the first region with the first cable clamp so that the first cable clamp  
23    conductively engages the conductive shield, and clamping the second region with the second  
24    cable clamp so that the second cable clamp conductively engages the conductive shield,  
25    thereby preventing electromagnetic radiation from passing through the first opening and the  
26    second opening.

1            40. The method recited in claim 39, wherein each cable clamp includes a first  
2    conductive plate and a second conductive plate, each of the plates having at least one groove  
3    formed therein, the first plate being positionable against the second plate so that the groove in  
4    the first plate and the groove in the second plate collectively form a hole extending from one  
5    edge of the cable clamp to an opposite edge of said cable clamp, the hole accommodating the  
6    cable therein.

1            41. The method recited in claim 39, wherein each cable clamp includes a conductive  
2    flexible fabric having at least one pattern formed therein, the pattern accommodating the  
3    cable therein.

1            42. The method recited in claim 41, wherein the pattern is a star-shaped pattern  
2    formed in the fabric, the pattern including a plurality of evenly spaced slits radially extending  
3    outward from a center of the pattern, and wherein every two adjacent slits forms a triangular  
4    flap.

1           43. The method recited in claim 42, wherein each cable clamp includes an upper and  
2    a lower rigid conductive plate, the conductive flexible fabric being clamped between the  
3    upper and lower plates.

1